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ABSTRACT

Intended as a companion piece to volume 7 in the Method Series, Pharmaceutical Supply System Planning (CE 024 234), this fifth of six volumes in the International Health Planning Reference Series is a combined literature review and annotated bibliography dealing with alternative methodologies for planning and analyzing pharmaceutical supply systems in rural areas of developing countries. The 110 references included in the review are contained in the bibliography which divides the references according to source: (1) U.S. government documents or reports; (2) supranational agency documents or reports; (3) industry, trade, and professional journals; (4) books, papers, addresses, and studies; and (5) miscellaneous. The format for each entry is author, title, source or publisher, date of publications, and annotation. (YLB)

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International Health
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Pharmaceutical Supply Systems Bibliographies

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Selected Bibliographies for Pharmaceutical Supply Systems

CE 024 227

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Selected Bibliographies for Pharmaceutical Supply Systems

U.S. Department of Health, Education, and Welfare
Public Health Service
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PREFACE TO THE SERIES

The International Health Planning Reference Series has been developed by the Office of International Health, Public Health Service, on request of the Agency for International Development.

The series consists of six basic volumes which cover a variety of health issues considered vital for effective development planning. These volumes contain reports of the state of the art surveys and bibliographies in selected subject areas. These are intended for the serious researcher and planning professionals.

These six volumes are supplemented by ten additional works in the International Health Planning Methods Series, which is intended to assist health sector advisors, administrators and planners in health related activities. Each manual in this series attempts to be both a practical tool and a source book in a specialized area of concern.

The volumes in the International Health Planning Reference Series contain the efforts of experienced professionals who have identified limited but pertinent reference materials for planning in a particular field. These efforts, however, were short term (2 man months) and were mainly prepatory to the writing of the manuals. Through this effort they hope to provide the AID field officers and the host country counterparts with useful references for systematic health planning in developing countries.

PREFACE TO VOLUME FIVE

The annotated bibliography which appears here deals with pharmaceutical supply systems as they apply to the needs of developing countries.

This work is the fifth volume in the International Health Reference Series, which is a six volume series of manuals and supporting documents produced by the Office of International Health on request by the Agency for International Development. The series is intended to provide AID advisors and health officials in developing countries with critically needed references for health planning.

Preparation of this volume was undertaken by SRI International, functioning as a subcontractor to E.H. White & Co., management consultants of San Francisco, California. Primary author of this volume was Leif Schaumann.

The primary objective of the literature search which resulted in this bibliography was to identify alternative methodologies for planning and analyzing pharmaceutical supply systems in rural areas of developing countries. A further objective was to review the literature as it pertains to the provision of pharmaceutical services in LDCs, focusing as much as possible on the rural poor.

The search was carried out by using several approaches and resources. A series of computer aided searches of specialized files - including MEDLINE, the National Technical Information Service, and the Smithsonian Scientific Information Exchange - were performed. Specialized libraries were scanned at the Agency for International Development, Walter Reed Army Hospital, the Library of Congress, the Pan American Health Organization, the World Bank, and the United Nations. Selected industry, trade and professional journals were also manually searched.

Contacts were made with knowledgeable individuals in academic institutions, business organizations, non-profit organizations such as TAICH (Technical Assistance Information Clearing House), and at consulting firms such as the American Public Health Association, MSH (Management Sciences for Health) and FHC (Family Health Care).

These efforts led to the identification of approximately 1,000 references. This list was further refined to the 110 items listed in the following bibliography, of which only 20 are considered as

directly relevant to both of the highly specific objectives of the original literature search.

Items not included in the bibliography fall predominantly into the categories of journals or special studies. Among this latter group are a long list of publications by various organizations sponsored by or affiliated with the organized pharmaceutical industry in European countries and the United States. Also, numerous studies by foreign governments and various agencies of the U.S. government, including texts of Senate hearings, have been excluded.

Special mention should be made, however, of a 50-page study on the organization and operation of the pharmaceutical sector in South Korea. While this study is directly pertinent, it has not been listed in the bibliography for lack of adequate identification, although indications are that it is a semiofficial document published in 1976.

It should be kept in mind that the bibliography in this volume, like those presented in other volumes of the International Health Planning Methods Series, makes no attempt to be exhaustive or even comprehensive. It is a selective list, compiled primarily on the basis of relevance to health planning in developing countries.

Paul Ahmed

Paul I. Ahmed, Project Officer
Office of International Health

GUIDELINES FOR HEALTH SECTOR ANALYSIS:

PHARMACEUTICAL SUPPLY SYSTEM (MANUAL)

BIBLIOGRAPHY

U. S. GOVERNMENT DOCUMENTS OR REPORTS

1.

Bowles, Grover C., et. al. Report of the Pharmacy Survey Team -- Vietnam. Agency for International Development, Washington, D.C. (1969).

Full realization of the benefits deriving from support of other health professions in Vietnam depends upon commensurate support of pharmacy. Specific recommendations to strengthen the pharmacy professions in Vietnam are provided. Mostly micro-aspects covered. Appendices.

2.

Furst, Barbara G. Traditional Medicine and Indigenous Practitioners. American Public Health Association, During the period April 1 through June 7, 1974 (in agreement with the AID).

Focus is on beliefs, practitioners, and practices in Africa, Asia, and Latin America.

3.

Syncrisis: The Dynamics of Health--Vol. XIV: Zaire. U. S. Department of Health, Education, and Welfare, Office of International Health, Division of Program Analysis, Rockville, MD (1976-?)

Includes broad overview over key elements of Zaire's pharmaceutical supply system. The unique functions of one major multinational pharmaceutical company is mentioned as is the unique status of the drug industry in Zaire. The importance of traditional medicine is emphasized. Well referenced.

4.

Medical Supply Depot Operations Manual. Department of Health, Education, & Welfare, Public Health Service, Washington, D.C. (1962 revision).

Manual designed for the use and guidance of Depot personnel in the daily operations of the Depot's activities. In addition to normal procurement, warehousing, and distribution functions, the Depot also performs various pharmaceutical services, including drug compounding and testing.

5.

Procurement and Use of Medicines in Afghanistan. Management Sciences for Health, Cambridge, Massachusetts, (October 1974).

An interim report sponsored by the U.S. Agency for International Development on the steps taken by the Afghan Ministry of Public Health to bring low-cost quality drugs to the people. "A careful drug policy can be a major factor in extending access to health services within budgetary constraints." Essentially micro-orientation towards some key elements in Afghanistan's pharmaceutical supply system. Figures. Appendices.

SUPRANATIONAL AGENCY DOCUMENTS OR REPORTS

6.

Cilingiroglu, a., (Coordinating Consultant for the Project). Transfer of Technology for Pharmaceutical Chemicals. Organization for Economic Co-Operation and Development (1975).

Excellent examination of technology transfer processes for pharmaceutical chemicals and specialties performed by interdisciplinary research teams in Greece, Portugal, Spain, Turkey, and Yugoslavia under the auspices of the OECD secretariat. "A main feature of the industry is its continuing dependence on foreign sources for technology and active ingredients." Recommendations. Tables. References.

7.

Action Programme for Co-Operation Among Non-Aligned and Other Developing Countries on Pharmaceuticals. Fifth Conference of Heads of State or Government of Non-Aligned Countries, Colombo, Sri Lanka (1976), (Document NAC/CONF. 5/11).

Politically oriented document focused on selected key elements of a pharmaceutical supply system: assortment, imports, local production, distribution and marketing, and research and development. Several radical proposals made concerning international collaboration.

8.

Resolution on the Cooperation Among Development Countries in the Production, Acquisition, and Distribution of Pharmaceutical Products. Fifth Conference of Heads of State or Government of Non-Aligned Countries, Colombo, Sri Lanka (1976)

Selective Adoption (less radical) of earlier proposed Action Programme.

9.

Gaps in Technology: Pharmaceuticals. Organisation for Economic Co-Operation and Development, Paris, France, (1969).

Classic study providing facts, figures, and analyses for ten OECD nations that participated in the project. Eleven chapters address macro- and micro-economic aspects of the industry. Conclusions focus on evidence of and reasons for technological gaps. Tables. References.

10.

Peruvian Basic Drugs Program. Pan American Health Organization (Directing Council), XXIII Meeting, Washington, D.C.

Comprehensive description of innovative pharmaceutical supply system, based on some 300 basic drugs acquired and distributed generically--claims for and results of the program not entirely clear.

11.

Ten-Year Health Plan for the Americas--Final Report of the III Special Meeting of Ministers of Health of the Americas. Pan American Health Organization, Washington, D.C. (1973).

Brief section on pharmaceuticals. Modern drugs have provided great benefits, but also created complex problems that have overwhelmed the drug control agencies in the Latin American and Caribbean countries. Recommends among others that each country establish a unified drug control agency funded at minimum 1% of domestic drug consumption.

12.

Lall, Sanjaya. Major Issues in Transfer of Technology to Developing Countries: A Case Study of the Pharmaceutical Industry. United Nations Conference on Trade and Development, Geneva, Switzerland (1975), (Document TD/B/C. 6/4).

Highly politicized and controversial study advocating several radical approaches to improving drug supply situation in developing countries. Many findings, conclusions, and recommendations have been convincingly refuted by industry organizations. Joint inter-country centers for production, purchase, and

technology cooperation ("COPPTEC"s) are major recommendations. Selectively referenced.

13.

Restrictive Business Practices: Review of Major Developments in the Area of Restrictive Business Practices. United Nations Conference on Trade and Development, Geneva, Switzerland (Document TD/B/C. 2/159), (29 April 1975).

Another controversial UNCTAD report that advocates increased regulation and government intervention to deal with perceived monopoly powers of the transnational drug companies in fields such as patents, trademarks, and pricing. References.

14.

The Role of the Patent System in the Transfer of Technology to Developing Countries. United Nations Conference on Trade and Development, Geneva, Switzerland (Document TD/BAC. 11/19/Rev.1), (1975).

Authoritative report prepared jointly by several supranational agencies on many features of the international patent system. "Patent laws and practices should be capable of effectively complementing other instruments of policy for national development." Richly referenced.

15.

Pharmaceuticals in Africa. United Nations Economic and Social Council, Economic Commission for Africa (Document E/CN.14/INR/217, Distr. Limited), (1976).

The difficulties in dealing with pharmaceuticals are enormous. The report covers trade, production, consumption, industry development, prices, generics, research and development, and makes vague recommendations.

16.

Consultation on Drug Policies 6-10 December 1976. World Health Organization, Geneva, Switzerland (Document PDT:29.11.76 Restricted), (1976).
In the framework of a new social and economic order, the time is now ripe to formulate new drug policies, particularly taking into account the Third World situation and emphasizing essential drugs for these countries. The document itself was the main foundation for drugs, the pharmaceutical supply system, and main issues in drug policies, and sets out recommendations.

17.

Consultation on the Seelction of Essential Drugs Geneva, 11-13 October 1976 World Health Organization, Geneva, Switzerland (Document DPM/76.1) (1976)

Medical criteria for selecting essential drugs and an initial listing of 130-140 active substances are provided, along with pertinent commentary and specific recommendations. Annotated references. Bibliography. Annexes.

18.

Prophylactic and Therapeutic Substances. World Health Organization, Organisation Mondiale de la Sante, Twenty-Eighth World Health Assembly (Document A28/11), (3 April 1975).

Excellent review of key drug-related problem areas. Suggestions for possible solutions stress the need for a comprehensive approach to the drug sector. Future WHO drug strategies and policies are outlined.

19.

Simon, Jan. Men and Medicine in the Middle East. The WHO Regional Office for the Eastern Mediterranean, Alexandria, U.A.R., (1969).

A factual and pictorial assessment of what 20 countries in the Middle East are doing to raise their peoples' health standards and how the World Health Organization is assisting them.

INDUSTRY/TRADE/PROFESSIONAL JOURNALS

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Benson, Herbert, MD & Mark D. Epstein. The Placebo Effect. Journal of the American Medical Association, Vol. 232. No. 12, June 23, 1975, pp. 1225-1227.

More emphasis on the potency of the placebo and its positive effects is needed. Comments provided on definition, utility, and the doctor/patient relationship as they relate to the placebo concept.

21.

Blake, Martin I., Ph.D., R.PH. Shelf-Life and Storage Conditions. American Druggist, May 1977, vol. 175, pp. 30 & 84.

Practical points on sotrage and labeling of drugs.

22.

Bruhn, Jan G., S. Tore Mellstrand. Naturprodukter som Lakemedel (Natural Products as Medicine). Lakartidningen, 1977, pp. 335-341.

Analysis of the importance of natural products in a modern pharmaceutical armamentarium.

23.

Bylinsky, Gene. Future Drugs That Will be Lifesavers for the Industry Too. Fortune, December 1976, pp. 152-162.

The future seems to hold an unparalleled promise of new lifesaving and pain-alleviating medicines. Molecular biology is the hottest science around. Specific new developments outlined.

24.

Drugs; Supply, Quality and Cost (Editorial). Ceylon Medical Journal, Vol. 20, No. 2, June 1975, ppl 67-68.

Authoritative critique of Sri Lanka's state monopoly on drug imports which has led to higher prices for consumers, lower drug quality, shortages, etc. Recommendations for corrective action provided.

25.

The Import & Manufacture of Pharmaceuticals in Ceylon-Comments on the Wickremasinghe-Bibile Report (Report of the Food & Drugs Subcommittee of the Ceylon Medical Association on).

Critique of Scheme to centralize drug import in a state entity and to establish a system of state drug factories.

26.

Pakistan: New Legislation Facilitates Use of Trade Names. Chemische Industrie International 2/74, pp. 67.

New Pakistani policy in generics becomes less doctrinaire and modifies various aspects of the drastic measures taken in the early 1970's.

27.

Connelly, William. The Pharmaceutical Potential in Nigeria. Medical Marketing & Media, October 1975, Vol. 10, pp. 18-23.

Appraises of pharmaceutical sales prospects in Nigeria and outlines elements of supply system.

28.

Current Regulations Affecting Chinese Medicines and Natural Drugs in Japan. Japan Medical Gazette, Vol. 14, June 20, 1977, pp. 2-3.

Chinese remedies now qualify for subsidy under the Japanese national health insurance scheme and the government has therefore subjected these remedies to the country's drug laws.

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Fisher, Julian, H., MD. Drugs in South America (Letter to the Editor). Pediatrics, Vol. 59, No. 3, March 1977, pp. 476.

Three examples of unethical or unsound marketing practices by foreign and national pharmaceutical companies in Peru.

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Ginsberg, Chaim. Ph.D. Pharmaceuticals--The Multinational Pattern. Drug & Cosmetic Industry, Vol. 114, February 1975, pp. 45-145.

The multinational pharmaceutical industry is viewed as a struggle to integrate, coordinate, and control the product life cycle. Predicts world drug industry domination by 20 firms in 1980.

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Haines, Bernard A., Jr., Ph.D. International Drug Regulations--Impact on Pharmaceutical Growth Prospects. Medical Marketing and Media, Vol. 11, November 1976, pp. 22-31.

Comprehensive overview focused on the developed world. Multinational drug research efforts will spread "with the developing countries receiving the major thrust." Conflict develops when the regulatory climate becomes overly political and socioeconomic rather than scientific. African and Asian countries have the least level of effective pharmaceutical regulations.

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Hemninki, Elina. Review of Literature on the Factors Affecting Drug Prescribing. Social Science & Medicine Vol. 9, 1975, pp. 111-115.

Discussion centers on education, advertising, colleagues, control and regulation measures, social and consumer demands, and physician characteristics. Focus is on Western countries. Extensive bibliography is included.

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Hvidberg, Eigill. Klinish Laegemiddelvurdering--Kan Vi Laere Af Historien? (Clinical Drug Evaluation: Can We Learn from History?). Medicinsk Forum, 17. aarg., No. 1, 1974, pp. 28-40.

A series of barriers to objective clinical drug testing are identified.

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Idriss, A.A., P. Lolik, R. A. Khan, and A. Benyoussef. Sudan: National Health Programme and Primary Health Care, 1977/78-1983/84. Bulletin of the World Health Organization, Vol. 53, No. 4, 1976, pp. 461-471.

An intersectoral approach--based on technical, cultural, socioeconomic, financial, and political consideration--has been devised in the Sudan. Pharmaceutical strategies and policies not well explained.

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Idriss, A.A., P. Lolik, R.A. Khan, and A. Benyoussef. The Primary Health Care Programme in Sudan. WHO Chronicle, Vol. 30, 1976, pp. 370-374.

Complements article in WHO Bulletin cited elsewhere in this bibliography. (Additional information on drug component of the program has been requested of authors).

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Drug Sales in Arab World Expected to Nearly Double by 1980, Followed by 50% Growth for Next Five Years. IMS Pharmaceutical Marketletter, September 13, 1976, pp. 13-15.

Retrospects, forecasts and plans by top executive of a major Jordanian pharmaceutical company. Problems related to infrastructure, capitalization, product registration, technology, and government support.

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State-Run Indian Firm Criticized for Turning Profitable Operation Into a Budgetary Drain. IMS Pharmaceutical Newsletter, April 5, 1976, pp. 15.

Inefficient operation of Indian state drug manufacturers.

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Jack. David. Limiting Factors in Drug Research. The Pharmaceutical Journal, September 18, 1976, pp. 229.

The need for new drugs and selected examples of potential new research breakthroughs are discussed along with barriers to and conditions for progress.

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Kaldor, A., MD. Patterns and Problems of Drug Consumption in a Developing Country. Clinical Pharmacology and Therapeutics, Vol. 19, No. 5, Part 2, May 1976, pp. 657-667.

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Kass, Leon R. The New Biology: What Price Relieving Man's Estate? Science, No. 174, No. 4011, November 19, 1971, pp. 779-788.

Concepts of risks and cost need broadening and should include social and ethical consequences because of the potentials of new biomedical knowledge.

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Kohn, R. and S. Radius. International Comparison of Health Services Systems: Annotated Bibliography. International Journal of Health Services, Vol. 3, No. 2, 1973, pp. 295-309.

Selected publications on health services systems, chiefly in developed countries. Note: No attention paid to pharmaceutical supply systems.

42.

Krause, Elliott A. Health and the Politics of Technology. Inquiry, Vol. 8, No. 3, September 1971, pp. 51-59.

The social role and political meanings of technology in health is explored. "Those who capitalize on the present crises in health care do so at great cost to the future health of us all." Well sourced.

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Kurtzman, Michael, Ned Heltzer and Robert Counts. Model for the Development of Rural Pharmaceutical Services. American Journal of Hospital Pharmacy. Vol. 34, February 1977, pp. 163-167.

A central pharmacy provides services to a small acute care hospital and 24 widely scattered clinics for ambulatory patients. Finance, administration, formulary development, purchasing, prepacking, and consulting services are covered. Operations are in one of the poorest 40,000 sq. mile regions of the United States.

44.

Ladejobi, Bode, B. Pharm. M.P.S. Guidelines to Pharmaceutical Marketing in West Africa. Medical Marketing & Media, January 1977, Vol. 12, pp. 13-19.

Pharmaceutical market factors are outlined for Nigeria, Ghana, Sierra Leone, and Liberia. Purchasing, pricing, promotion, distribution, and manufacturing aspects are overviewed. Points to political influences and need for collaboration with foreign companies.

45.

Lloyd, John S. Improving the Cold Chain for Vaccines. WHO Chronicle, Vol. 31, 1977, pp. 13-18.

A new system for storing and transporting vaccines is being tested in Chana. Important "micro" problems addressed.

46.

Lalagon, F. Ambrosio, Ph.D. Health Care in Brazil--An Overview. Medical Marketing & Media, July 1977, Vol. 12, pp. 13-21.

Overview of Brazilian health care infrastructure and pharmaceutical situation. Self-sufficiency in drugs will require another 25 years for lack of basic chemicals and technology.

47.

Masawe, Aaron E. J., MD and M. H. Samitz, MD. Dermatology in Tanzania: A Model for Other Developing Countries. International Journal of Dermatology, Vol. 15, No. 9, November 1976, pp. 680-687.

A clinical approach to improving dermatological services is suggested. Pharmaceutical problems ignored.

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Responses to MWN's Delphi Poll on Medical Progress. Medical World News, Vol 18, No. 2, January 24, 1977, pp. 56-59.

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Muller, Charlotte. The Overmedicated Society: Forces in the Marketplace for Medical Care. Science, Vol. 176, May 5, 1972, pp. 488-492.

Levels of drug prescribing are determined by converging interest of manufacturers, doctors, and others.

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Nordberg, E., MD. Self-Portrait of the Average Rural Drug Shop in Wollega Province, Ethiopia. Ethiopia Medical Journal, Vol. 12, No. 1, January 1974, pp. 25-32.

Good basic study of demand patterns. Drug shops probably account for 55% of patient contacts versus 45% for all other health care facilities combined--in this Ethiopian province.

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Rabin, David L. and Patricia J. Bush. The Use of Medicines: Historical Trends and International Comparisons. International Journal of Health Services, Vol. 4, No. 1, 1974, pp. 61-87.

Cross-national comparisons of drug usage in 7 developed countries document wide differentials in prescribed and nonprescribed medicine use. Problems of data comparability are emphasized and explained. Needs assessment is more important than cost controls for an optimal usage pattern.

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Sangsingkeo, Vitura, MD, M.P.H. The Interrelationship of Traditional Medicine and Modern Medicine in the Developing World. Journal of the Medical Association of Thailand, Vol. 59, No. 1.

Excellent overview of fundamentally different treatment modes and their underlying philosophies. "Modern medicine should decrease its superiority complex."

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Schaumann, Leif. Pharmaceutical Industry Perspectives to 1985. Medical Marketing and Media, April 1976, Vol. 11, pp. 35-42.

Elements of U.S. and Scandinavian pharmaceutical supply systems described and implications for the United States summarized.

54.

Schaumann, Leif. Trends in Contemporary Pharmaceutical Supply Systems. California Pharmacist, September 1976, pp. 36-40.

Outlines 13 components--functional and evaluative--of a pharmaceutical supply system. Major trends in 5 components are assessed. Focus is on the United States and Europe.

55.

More discussions on Third World Drug Problems. SCRIP, July 23, 1977, p.15.

World drug policies towards less developed countries may be shifting towards new emphasis on collaboration with multinational drug companies.

56.

The Future of the Pharmaceutical Industry in Indonesia. SCRIP, July 2, 1977, pp. 18-19.

Government strategies for achieving drug self sufficiency and efficiency of drug usage are overviewed. Market size and growth prospects are covered.

57.

WHO and Germans Pushing Ahead with Discussions on World Drug Scheme. SCRIP, June [illegible], 1977, p. 7.

Reactions by national drug industry interests in Germany and Switzerland indicate willingness to discuss preferential pricing for basic drugs to less developed countries.

58.

Turkey is Virtually Self Sufficient in Finished Drugs. SCRIP, May 14, 1977, pp. 19.

Comments on production, demand structure, pricing, R & D., and role of foreign versus domestic drug companies.

59.

United Arab Emirates: Dramatically Increasing Drug Demand. SCRIP. April 9, 1977, pp. 14-15.

Outlines procurement and product registration procedures.

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IFPMA Urges Uniform Worldwide Labeling. SCRIP, March 19, 1977, pp. 17.

Policy statement by the International Federation of Pharmaceutical Manufacturers Associations.

61.

South Korea, A Booming $400 Million Market. SCRIP, March 19, 1977, pp. 12-13.

Overviews aspects of the extraordinary South Korean pharmaceutical market. Strong government interests have collaborated with private national interest to create a major national industry. MNCs play very limited role.

62.

SRI Lanka's State Pharmaceuticals Corporation Cuts Drug Costs. SCRIP, March 19, 1977, p. 18.

Sri Lanka's pharmaceutical strategy is briefly reviewed.

63.

New Colombian Laws to Guarantee Fair Drug Pricing. SCRIP, October 30, 1976, p. 5.

Price regulations in Colombia affect manufacturers, wholesalers, and retailers by imposing new calculation structures.

64.

Pharmaceutical Industry in Argentina--Is the Bonanza Over. SCRIP, August 21, 1976.

Possible solutions to price problems are outlined.

65.

The Growing Importance of the INPS and CEME in Brazil to the Drug Industry. SCRIP, November 1, 1975, p. 2.

Brazilians seek to improve economic access to drugs by expanding social security scheme and centralize procurement.

66.

Chile: Pressure on Doctors and Pharmacists to Prescribe Economy Medicines. SCRIP, July 5, 1975, p. 7.

Chilean government official recognizes the importance of the profit motive in assuring patients of drug availability.

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Obstoj, Barbara. The Pharmaceutical Market in Thailand. SCRIP, November 21, 1974, pp. 9-11.

Overviews market size and structure, corporate participants, trade and distribution, and government influence.

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Ghana Hopes for Herbal Medicine Sufficiency. SCRIP, September 12, 1974, p. 2.

Local MD has considerable success in using herbal remedies and has established the Centre for Scientific Research into Plant Medicine.

69.

Ambitious Plans for Indian Drug Industry. SCRIP, August 29, 1974, p. 6.

Government plans for Indian drug industry growth and development under the fifth 5-year plan.

70.

Cheap Basic Medicines Bring Big Changes to Peruvian Pharmaceutical Industry. SCRIP, November 8, 1973, pp. 10-11.

Outlines Peruvian basic medicines program and points to certain strengths and weaknesses in the scheme.

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Unschuld, Paul U. Western Medicine and Traditional Healing Systems: Competition, Cooperation or Integration? Ethics in Science & Medicine, Vol. 3, No. 1, May 1976, pp. 1-20.

Four dimensions of Western and indigenous medical subsystems are explored in terms of their types of coexistence. Some integration in the drug and healing techniques dimensions is found, but there is little cooperation and much competition--especially in the dimensions of manpower and concepts.

72.

Virts, John R., Ph.D. An International Look at Prescription Drug Pricing. American Druggist, Vol. 175, July 1977, pp. 54-64.

Economic explanation of reasons why price differences are to be expected.

73.

Wardell, William M., MD, Ph.D. Drug Development, Regulation, and the Practice of Medicine. Jou-nal of the American Medical Association, Vol. 229, No. 11, September 9, 1974, pp. 1457-1461.

The drug development and drug regulatory processes may already be prototypes for wider changes in medical practice. Legislative and regulatory interventions need careful design planning and evaluation.

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Drug Information Highlights. Washington Drug and Device Letter, Vol. 9, No. 28, July 11, 1977, pp. 4-10.

Selected reviews of presentations by 80 speakers at the Drug Information Association meeting in Toronto, June 1977. Topics discussed include drug information centers, professional attitudes towards information, patient package inserts, computers, role of government, and cost/funding.

75.

White, Kerr L. International Comparisons of Medical Care. Scientific American. Vol. 233, No. 2, August 1975, pp. 17-25.

Patterns of health care systems in 12 areas of 7 countries (including Yugoslavia and Argentina) are examined. Differences in drug consumption is found to be particularly strong for nonprescription medicines. Reasons are explored.

76.

Wickremasinghe, S.A. and S. Bibile. Pharmaceuticals Management in Ceylon. British Medical Journal, Vol. 3, September 25, 1971, pp. 757-758.

Summary of 1971 study report: " The Management of Pharmaceuticals in Ceylon" by the same authors. The proposals of the report center on optimization of pharmaceutical imports through centralized buying from cheapest sources, reduction of assortment, abolishment of trade names where possible, curtailment of drug advertising, patent law modification, etc.

77.

National Drug Policies. WHO Chronicle, Vol. 29, 1975, pp. 337-349. (Based on a report submitted by the Director-General of WHO to the Twenty-eighth World Health Assembly).

Insightful treatment of drug sector complexities organized in 13 sections. Overcoming problems depends on holistic approach at the national planning level which must link drug priorities with health and economic priorities. Specific suggestions are made (essential drugs list, local or regional production). Includes directives by 28th World Health Assembly to WHO, flowing from this paper.

78.

Evaluation in Drug Control: WHO Chronicle, Vol. 28, 1974, pp. 283-287.

Guidelines for clinical evaluation of drugs are provided, policy for combination drugs is presented, and several other regulatory issues are discussed.

79.

Drug Consumption in Europe. WHO Chronicle, Vol. 25, No. 10, October 1971, pp. 458-466.

The vagaries of drug utilization are explored and methods of measuring consumption are outlined.

80.

Albach, Horst, et. al. (Editors). Zukunftsprobleme Unserer Wirtschaft dargestellt am Beispiel der Pharma-Industrie ("Our Future Socioeconomic Problems: A Reflection of the Pharmaceutical Industry"). Betriebswirtschaftlicher Verlag Dr. Th. Gabler - Wiesbaden, (1976).

Collection of socioeconomic, sociomedical, and sociopolitical papers presented at German university seminar. The central theme concerns the relationship between the public and private sectors.

81.

Farber, Bernard. Drugs and Society. Russell Sage Foundation, New York, 1967.

Drugs are much too complex a set of matters to be treated only from a single or limited point of view and must always be studied concurrently in the physiological, the psychological, and the social contexts. Volume contains excellent chapter on definition and functions of drugs. Good bibliography and index.

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Barker, Carol. Pharmaceutical Production in a Less Developed Country. Institute of Development Studies at the University of Sussex, Brighton, England, June 1975.

Possible alternative resource bases for pharmaceuticals in developing countries without a petrochemicals industry are discussed with Tanzania as an example.

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Bryant, John H. The Gap Between Biomedical Technology and Health Needs in Developing Countries. Science and Technology in Developing Countries, proceedings of a conference held at the American University of Beirut, Lebanon, 27 November - 2 December 1967, University Press, Cambridge, Mass., 1969, pp. 1-29.

Quantitative barriers in delivering health care must be overcome by new technologies in delivery to meet health care demands. Focused on health manpower needs.

84.

Cento Seminar on Use and Misuse of Antimicrobial Drugs. CENTO (Central Treaty Organization), Ankara, Turkey, 1975.

Causes for and patterns of inappropriate use of antimicrobial drugs identified and discussed. Focus is on Turkey, Iran, and Pakistan. Resolutions and 19 specific recommendations advocating stricter regulations and enforcement.

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Conley, Bernard E., Ph.D. Social and Economic Aspects of Drug Utilization Research. Drug Intelligence Publications, Inc., Hamilton, IL 1976.

An impressive overview of the state of knowledge, an analysis of the outcome of federally supported research, and a digest of relevant literature during 1960-1975. Ten major and 31 minor topics that are all parts of a pharmaceutical supply system are covered. However, the focus is on the United States

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Cooper, A. J. and M. H. International Price Comparison (A Study of the Price of Pharmaceuticals in the U.K. and eight other countries in 1970). Prepared for the Pharmaceuticals Working Party of the Economic Development Committee for the Chemical Industry, London, England, August 1972.

Considerable differences exist in price levels among 7 European countries and Turkey. Variable factors are identified. Government influence is found to be the main variable.

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Croizier, Ralph C. Traditional Medicine in Modern China: Science, Nationalism, and the Tensions of Cultural Change. Harvard University Press, Cambridge, Massachusetts (1968).

Indigenous medicine and the extent of its importance reflects nonscientific sociocultural and sociopolitical pressures. Notes. Vast bibliography. Glossary. Index.

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Grabowski, Henry G. Drug Regulation and Innovation-Empirical Evidence and Policy Options. American Enterprise Institute for Public Policy Research, Washington, D.C. (1976)

Regulatory policies in the United States are causing the country to lose its technological superiority in drug discovery. Causes for this development are identified and examined, and policy recommendations made.

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Heller, William M., Ph.D., Melvin D. Yahr, M.D., and Gordon K. Worster. "Approved for Inclusion in the USP"-- An Obsolete Concept? Presentation to the Academy of Pharmaceutical Sciences, Section on Economics and Administrative Science, 124th APhA Annual Meeting, May 17, 1977, New York.

The USP drug selection process and program is detailed. Exhibits show methodology and criteria.

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Helms, Robert B. (Editor). Drug Development and Marketing. A conference sponsored by the Center for Health Policy Research of the American Enterprise Institute, Washington, D.C. (1975).

The proceedings of this major conference among authorities in the field provide good lessons about the workings of pharmaceutical markets. Economic perspective with focus on the United States. "Government may make all the rules it likes, but if those rules receive only grudging ac-eptance by physicians, they are not likely to be helpful or permanent." Numerous tables. Illustrations. References.

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Legal and Practical Requirements for the Registration of Drugs (Medicinal Products) for Human Use. International Federation of Pharmaceutical Manufacturers Association (IFPMA), Zurich, Switzerland, March 1976.

Handbook covers drug regulatory systems in 45 countries--half of them less developed (chiefly in Latin America). Individual sections deal with general information, documentation for product marketing approval, marketing and distribution, manufacturing, and post-registration surveillance. Note: Not generally available.

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Kaufer, Erich Dr. Prof. Die Ökonomik der pharmazeutischen Industrie ("The Economics of the Pharmaceutical Industry"). Nomos Verlagsgesellschaft, Baden-Baden, Germany (1976).

Through economic analysis of the drug industry focused on competition, innovation, and overall performance. Tables. Graphs. References.

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Lasagna, Louis, M.D. Current Status of International Drug Relations. The Center for the Study of Drug Development, University of Rochester Medical Center, Rochester, New York (Publications Scries PS 7704). June 1977.

"One of the most striking facts about the world drug regulatory scene is its variability." Examples are provided and recommendations for regulatory policy given.

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Mitchell, Samuel A., and Emery A. Link (Editors). Impact of Public Policy on Drug Innovation and Pricing (Proceedings of the Third Seminar on Pharmaceutical Public Policy Issues). The American University, Washington, D.C. (1976).

Major topics pertaining to public policy vis-a-vis the pharmaceutical industry are discussed by leading authorities. Focus is on the U.S. Numerous references.

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Peltzman, Sam. Regulation of Pharmaceutical Innovation: The 1962 Amendments. American Enterprise Institute for Public Policy Research, Washington, D.C., 1974, p. 118.

Classic, but controversial economic study of cost-benefit relationships of the 1962 U. S. Drug Legilsation. A net social loss to the United States of $250-300 million per year is found. Tables. References.

96.

Current Status and Future of the Pharmaceutical Industry--Papers submitted for Distribution at a Management Science Conference for the Pharmaceutical Industry. Purdue University, West Lafayette, Indiana (1976).

Papers presented at this annual pharmaceutical conference dealt with drug marketing and distribution, regulation, research, production, and controlled delivery of medication. General focus was on the United States, but paper on Mexican pharmaceutical market and prospects also delivered.

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Rosner, Martin M. and Alexander Sarros. Determinants of International Drug Consumption. Presented to the American Pharmaceutical Association, San Francisco, California, March 31, 1971.

Partial consumption model was constructed based on data for gross national product, physicians, pharmacists, and life expectancy at birth. The data were correlated with national drug consumption at pharmacy purchase prices for 71 countries. More sophisticated models needed.

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Said, Hakim Mohammad. Medicine in China. Hamdard Academy, Karachi-Pakistan (1965).

Appraisal of Chinese medical practice and history by leading authority on "Unani" medicine. Description of selected Chinese remedies and their use.

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Schaumann, Leif. Pharmaceutical Industry Dynamics and Outlook to 1985. Stanford Research Institute, Menlo Park, California (1976).

Holistic view is presented of the current and expected future global pharmaceutical enterprise. Sociopolitical, socioeconomic, and drug industry economic covered in macro terms. Conceptual framework for pharmaceutical supply system outlined and major societal and industry-specific trends and issues are discussed and assessed.

100.

Schaumann, Leif. Pharmaceutical Research: An International Quest for Technology. Presentation delivered to the Academy of Pharmaceutical Sciences, A.Ph.A., at the Americana Hotel, New York City, on May 17, 1977.

"Nations that can effectively integrate their health and social policies with the industrial and technological components of their economic policies and assets will become formidable competitors in the global pharmaceutical enterprise through their chosen companies."

101.

Schwartzman, David. Innovation in the Pharmaceutical Industry. The Johns Hopkins University Press, Baltimore and London, (1976).

Thorough analyses of salient issues surrounding drug research. "Public policy towards the industry should be formulated in the context of a broad program for the improvement of the medical care system. Drugs are the major medical technology, and the reduction of the suffering and cost of disease will require the developments of new drugs. These are the primary considerations which should guide the development of public policy."

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Segall, Malcolm. Pharmaceuticals and Health Planning in Developing Countries. Institute of Development Studies at the University of Sussex, Brighton, England, December 1975.

A pharmaceuticals policy can best be developed by combining the "medical" and "economic" approaches, which are usually separated. Outlines of the main diseases in developing countries and the strategies needed to combat them. The role of pharmaceuticals is placed within this context. Therapeutic need and cost-effectiveness, national production, importation and distribution and formulating a national pharmaceuticals policy are among specific topics discussed from a theoretical viewpoint. Selectively referenced.

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Silverman, Milton and Philip R. Lee. Pills, Profits, and Politics. University of California Press, Berkeley and Los Angeles, California, (1974).

"A significant portion of drug use, both prescription and over-the-counter, is unnecessary and irrational." The drug industry in particular, but also others, including physicians and patients, bear the responsibility for this situation. Future strategy recommendations center on physicians, pharmacists, the drug industry, the insurance industry, the government, and consumers/patients. Focus is on the United States. Illustrations. Tables. References.

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Wardell, William M., and Louis Lasagna. Regulation and Drug Development. American Enterprise Institute for Public Policy Research, Washington, D.C., (1975).

Authoritative discussion of public policy issues and scientific factors surrounding the different approaches taken to regulation of the drug discovery and development processes in the United States and the United Kingdom. Recommendations for the United States. Tables. References.

MISCELLANEOUS

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Reclassification of Drugs (History and Background). American Pharmaceutical Association, Washington, D.C. (1977).

APhA's position on 4 classes of drugs is discussed.

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Drug Prices: Their National and International Importance. Boehringer Ingelheim, Germany: Annual Report (1975).

Discussion by leading drug MNC of German and international drug price problematics. "Drug prices are primarily market prices." "The pharmaceutical industry has to live with internationally varying drug prices; it cannot prevent them."

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Memorandum of Association and Rules and Regulations. Hamdard National Foundation Karachi (Pakistan) (March 1969).

Voluntary organization dedicated to, among others, further development of indigenous medicine according to specific principles.

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Rosen, C. O. Lakemedels Forsorjning Och Lakemedels Hantering ("Drug Supply and Drug Handling--A Compendium of Trade and Industry Insights") Lakemedelsindustriforeningen, Stockholm (1975).

Excellent discription of many key elements of the Swedish pharmaceutical supply system. Many macro and micro aspects covered in 18 chapters. Tables, figures, and graphs.

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A Barefoot Doctor's Manual (The American Translation of the Official Chinese Paramedical Manual). Running Press, Philadelphia, Pennsylvania (1977).

American translation of the official Chinese paramedical manual. Basic reference tool for Chinese "peasant doctors," listing 197 diseases and recommended Chinese and Western treatments. Some 500 herbs are described along with their preparation and use in illness and disease. Focus of the manual is on signs and symptoms of diseases, their diagnosis and treatment with specific drugs as found in rural areas of Hunan Province.

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Said, Hakim Mohammed (Editor). Hamdard Pharmacopoeia of Eastern Medicine. Pharmaceutical Advisory Council of Hamdard, Karachi, Pakistan (1969).

Authoritative discussion of "Eastern Medicine," including compendium of drugs and medicinal plants, pharmacopoeia, pharmaceutical code, and selected papers on drug research in "Eastern Medicine." References.

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